HIGH-Q

velleman-kit

K6707

CODELOCK RECEIVER FOR K6706

GEBRUIKSAANWIJZING 3

MODE D'EMPLOI 8

USER'S MANUAL 13

BEDIENUNGSANLEITUNG 18

CODELOCK RECEIVER

Together with the K6706 codelock transmitter this kit can be used for remote control operation of many things: garage door, door lock, car alarm (e.g. K3504) perhaps together with a central locking system, remote controlled operation of lighting - both indoors and outdoors, etc. The code can be selected from around 8,000 combinations providing no chance for unwanted visitors. It is also possible to use a number of receivers in conjunction with one transmitter or vice-versa. Our WCAH2851 box may be used for the housing.

TECHNICAL DATA

- Easy to build: no coils necessary.
- Works together with the K6706 two channel codelock transmitter.
- Choice of two channels.
- 8748 possible codes.
- Transmitter/receiver range 30m approx.
- LED on/off indication.
- LED indication of reception strength.
- Relay output; 10A change-over contact or pulse contact.
- Separate output to switch car alarm in or out.
- Supply: 2 x 9 VAC or 12 to 16 VDC/100mA max.

CONSTRUCTION

IMPORTANT
MOUNT ALL COMPONENTS AGAINST THE P.C.B.
USE A SMALL SOLDERING IRON OF MAX. 40W
USE THIN (1mm) SOLDERING TINDO NOT USE SOLDERING GREASE!
CARELESS ASSEMBLY WILL UNDOUBTEDLY LEAD TO PROBLEMS

Mount the components in the order indicated in the separate parts list. The parts marked with (!) require special attention in the assembly instructions.

By using the jumpers, the receiver can be set up for two output possibilities:
1) The output is on while the transmitter is pressed (MOMENT), this is mostly used for operating a door lock, garage door etc.

2) The output switches (on/off) every time the transmitter is pressed (toggle), this setting is mostly used for switching alarms in and out, for operating central door locking systems, for switching a lamp on and off, etc. This setting must be used for use with our car alarm K3504.

1. Jumpers.
2. 1/4W resistors.
3. Diodes. Check for correct polarity.
4. Zener diodes. Check for correct polarity.
5. Coil. This looks like a resistor.
6. Capacitors.
7. IC sockets.
8. Electrolytic capacitors. Ensure correct polarity.
9. LED. Ensure correct polarity.
10. Transistors.
11. Variable capacitor.
12. Voltage regulator.
13. Screw connectors. These must be pushed together.
14. Relays.
15. Mount the ICs in their sockets. Be careful of the position of the ridge.
16. Setting the code:
    You can select your own code for a transmitter/receiver combination. There is a 9 row jumper island located directly next to IC1 for setting the code. The code is set by connecting one or more code points to a neighbouring + or - point using the small jumpers. Code points may also be left unconnected (open): see figure.
    a) No connection.
    b) Code point connected to -.
    c) Code point connected to + (note certain points cannot be connected to +).

The transmitter is now ready for final tuning.

TEST AND FINAL TUNING

IMPORTANT:

- A plastic screwdriver (including plastic blade) is needed to tune the transmitter or receiver . This is supplied with the receiver.
- The transmitter must be in its housing with the cover off.
- The receiver may not be in the vicinity of any metal objects.
- The transmitter and receiver must have the same code.
- If it is to be operated from push button SW1 of the transmitter, jumper CH1 of the receiver must be set. Otherwise, jumper CH2 must be set for operation from push button SW2.

1) Tuning receiver:

- Set the tuning capacitor of the receiver to around the middle of its adjustment range (see fig. 17).
  Check that the tuning LED of the receiver is not lit up, or is just on the verge of lighting up. If not, the tuning capacitor will have to be adjusted a little. Do not touch the circuit with your hand.

2) Tuning one or more transmitters to the receiver:

- Activate the transmitter (**do not touch any other parts other than the push button**) and then (very carefully) turn the tuning capacitor until the tuning LED of the receiver lights up. If everything is correct, the relays should now switch, if of course the codes of the transmitter and receiver are the same.
- Now take the transmitter to a distance of about 10 metres from the receiver and repeat the test. Then the transmitter can be tested from around 20 metres (perhaps ask somebody to help you).
- If the transmitter cannot be tuned to the receiver, then it might be that the tuning capacitor of the receiver needs to be adjusted.

CONNECTION

Supply:
18.Connection to DC voltage (e.g. car battery).
19.Connection to AC voltage (e.g. 2x9 VAC/100 mA transformer).

Other connections:
When using the relay output there is a choice between a normally closed contact (NC) or a normally open contact (NO). The common output is at COM.

20.For connection to the K3504 car alarm the DIS points of both circuits must be connected together. In this case the "DIS" connection of the car alarm must not be connected to the contact lock. For remote controlled operation of the car alarm, the SWITCHING TIME (IN and OUT) can be set to minimum.
The free relay contacts can be still be used to operate the central locking system for example.

For indication purposes, LED LD1 can be mounted somewhere on the dashboard using the LED holder supplied. When the relay is closed the LED will flash, when open it is continuously lit.

NOTE

The circuit can also be installed in a plastic housing.

For installation in the car, the circuit can be mounted somewhere under the dashboard, and preferably in a place where there are few metal parts. It may be the case that after installation in the car, the circuit will have to be retuned. This is because of the influence of metal parts in the vicinity of the circuit. Because of the earth screen in a car, the transmitter/receiver range will be approximately halved which in most cases is more than sufficient.

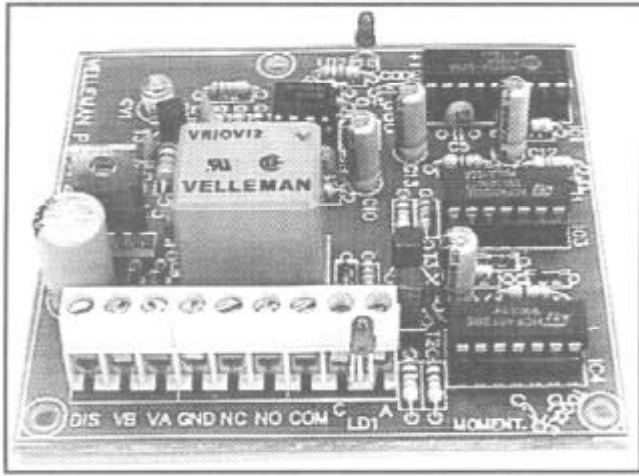
velleman-kit HIGH-Q

K6707

CODELOCK RECEIVER FOR K6706

- Easy to build: no coils to be made!
- Operates in conjunction with the K6706 two channel transmitter
- 8.748 possible codes
- Range of the transmitter/receiver: +/-30m
- LED on/off indication - LED receiving level indicator
- Relay output: 10A toggle or momentary contact
- Separate output to switch car alarm on or off
- Power supply: 2 x 9VAC or 12 to 16VDC / 100mA max.
- Dimensions: 76 x 84mm

modifications reserved



H6707P-ED1

	I	P	E	SF	S	DK	N	D	GB	F	NL
code	CODICE COLORE	CODIGO DE CORES	CODIGO DE COLORES	VÄRIKOODI	FÄRG SCHEMA	FARVEKODE	FARGEKODE	FARBKODE	COLOURCODE	CODIFICATION DES COULEURS	KLEURENCODE
0	Nero	Preto	Negro	Musta	Svart	Sort	Svart	Schwarz	Black	Noir	Zwart
1	Marrone	Castanho	Marrón	Ruskea	Brun	Brun	Brun	Braun	Brown	Brun	Bruin
2	Rosso	Encarnado	Rojo	Punainen	röd	Rød	Rød	Rot	Red	Rouge	Rood
3	Arancio	Laranja	Naranjado	Oranssi	Orange	Orange	Oransje	Orange	Orange	Orange	Oranje
4	Giallo	Amarelo	Amarillo	Keltainen	Gul	Gul	Gul	Gelb	Yellow	Jaune	Geel
5	Verde	Verde	Verde	Vihreä	Grön	Grøn(n)	Grønn	Grün	Green	Vert	Groen
6	Blu	Azul	Azul	Sininen	Blå	Blå	Blå	Blau	Blue	Bleu	Blauw
7	Viola	Violeta	Morado	Purppura	Lila	Violet	Violett	Violett	Purple	Violet	Paars
8	Grigio	Cinzento	Gris	Harmaa	Grå	Grå	Grå	Grau	Grey	Gris	Grijs
9	Bianco	Branco	Blanco	Valkoinen	Vit	Hvid(t)	Hvit	Weiss	White	Blanc	Wit
A	Argento	Prateado	Plata	Hopea	Silver	Sølv	Sølv	Silber	Silver	Argent	Zilver
B	Oro	Dourado	Oro	Kulta	Guld	Guld(l)	Gull	Gold	Gold	Or	Goud

P6707

1

J

2 1/4W

R1: 270 (2-7-1-B)
R2, R3: 18K (1-8-3-B)
R4: 33K (3-3-3-B)
R5: 5K6 (5-6-2-B)
R6: 2K7 (2-7-2-B)
R7: 6K8 (6-8-2-B)
R8: 6M8 (6-8-5-B)
R9, R10: 1K (1-0-2-B)
R11: 100K (1-0-4-B)
R12, R13: 47K (4-7-3-B)
R14: 470 (4-7-1-B)
R15: 470K (4-7-4-B)
R16... R18: 10K (1-0-3-B)
R19: 220K (2-2-4-B)
R20: 680 (6-8-1-B)
R21: 2K2 (2-2-2-B)

3

D1... D5: 1N4148 !
D6, D7: 1N4000 ... 4007 !

4

ZD1: 4V3
ZD2: 4V7 (5V1)

5

L1: 1µH (1-0-B)

6

C1, C2: 2pF (2.2)
C3: 22pF
C4: 82pF
C5... C7: 330pF (331)
C8, C9: 100nF (104, µ1)

7

IC1: 18P
IC2: 8P
IC3, IC4: 14P

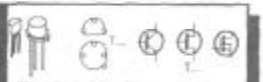
8

C10... C14: 1µF !
C15: 470µF !

9

LD2: 3mm !

10



T1: BF199
T2, T3: BC547

11

CV1: 5p (5p5)

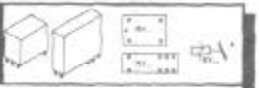
12

VR1: 7809

13

J1... J3: 3P !

14



RY1: VR10V12

15

IC1: UM3758-120A
IC2: RV4558-LM258-2904
IC3: CD4013
IC4: CD40106

16 CODE !

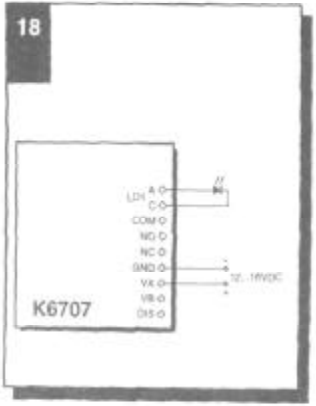
a) No connection

b) Connection to '-'

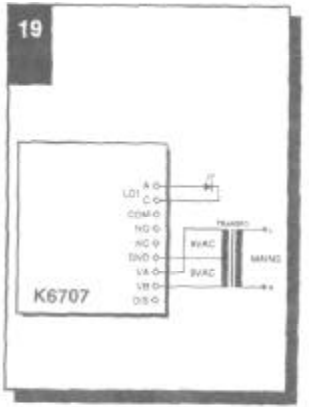
c) Connection to '+'

17

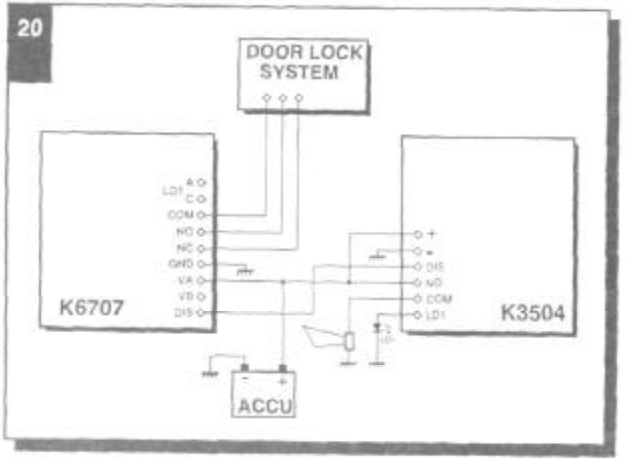
18

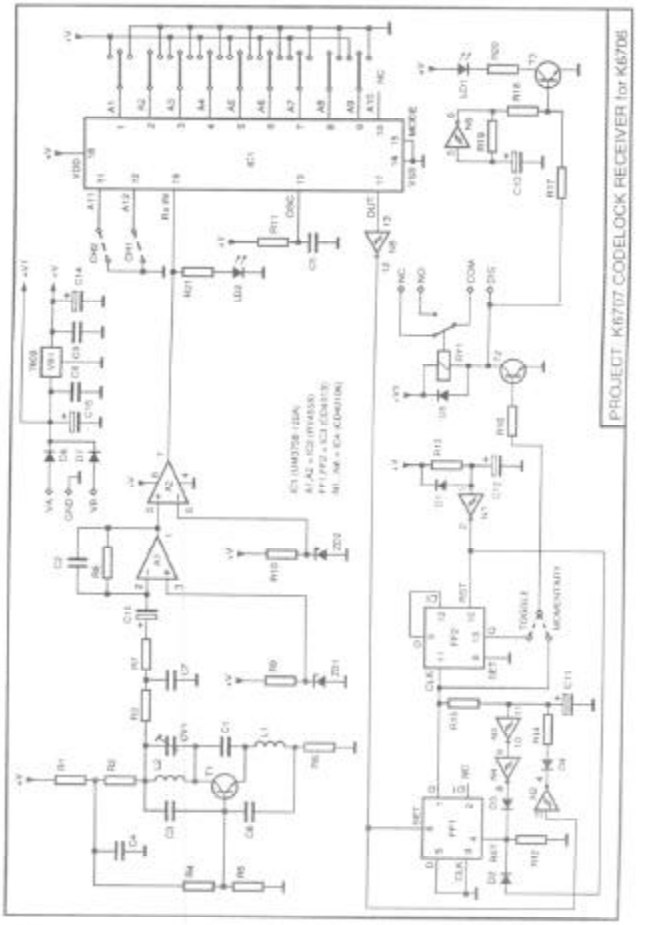


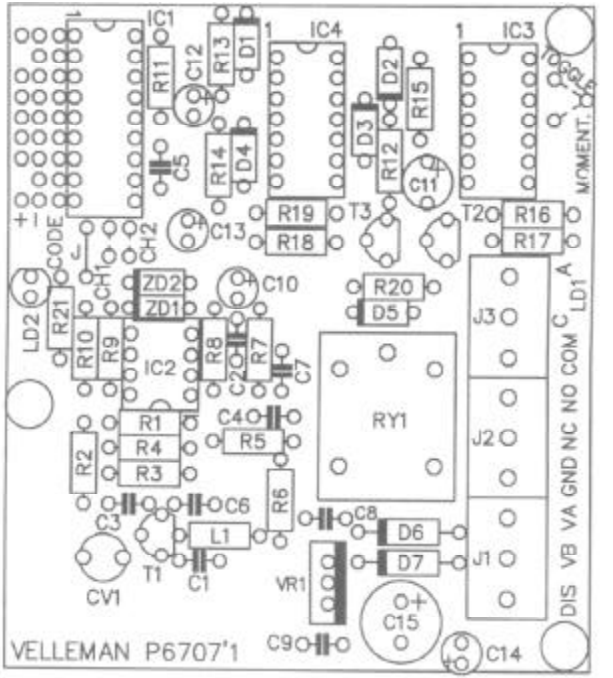
19



20




PROJECT: K6707 CODELOCK RECEIVER for K6706


VELLEMAN P6707'1
DIS VB VA GND NC NO COM
MOMENT.